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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,315	02/08/2002	Bradley R. Ringeisen	83,665	8845

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EXAMINER

FULLER, ERIC B

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,315

Applicant(s)

RINGEISEN ET AL.

Examiner

Eric B Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 14-17, 19-25, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 6,159,832) in view of Bills et al. (US 5,308,737).

Mayer teaches a pulsed laser deposition process for depositing electrically conductive materials on to glass or silicon substrates that uses the same configuration as the applicant, i.e. laser through back of transparent substrate (column 7, lines 15-24; column 10, lines 7-25). The laser is computer controlled and is directed through an objective (figure 2). It is taught that the composite material is a metal film that is partially vaporized such that a portion of the metal film is transferred to the substrate (column 3, lines 5-15). A gap exists between the target substrate and the receiving substrate (figures). The reference fails to teach that the composite material is made of a matrix material and a transfer material.

However, Bills teaches that by having the composite be made of a matrix material that desorbs from the target substrate and a transfer material, the exposure fluence required to induce transfer is reduced (column 5, lines 30-35). Additional benefits are that since the matrix material is being vaporized instead of a portion of the metal, harmful metal vapors are not being released into the air and less metal is being wasted/used (column 5, lines 40-47). It would have been

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obvious at the time the invention was made to a person having ordinary skill in the art to use the matrix material of Bills in the process taught by Mayer. By doing so, the exposure fluence required to induce transfer is reduced, less metal is wasted/used, and harmful metal vapors are not being released into the air.

Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 6,159,832) in view of Bills et al. (US 5,308,737), as applied to claim 1 above, and further in view of Ross (US 5,743,560).

Mayer, in view of Bills, teaches the limitations of claim 1, as shown above. The combination of reference fails to explicitly teach machining the substrate with the laser. However, Ross teaches laser machining of substrates is that is performed in order to achieve design features. For glass substrates, the machining is performed after the coating, due to the powerful laser required to perform such a process. For non-glass substrates, the machining is performed before the coating (column 2, lines 4-43). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize the laser machining taught by Ross in the process taught by Mayer. By doing so, design features are achieved. To perform the machining prior to or after the coating would have been obvious depending on the substrate that is used, as taught by Ross. To machine with the same laser used in transfer or a different laser would have been equally obvious, as the choice between which laser to use is not critical to the success of the process.

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Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 6,159,832) in view of Bills et al. (US 5,308,737), as applied to claim 1 above, and further in view of Williams et al. (US 4,987,006).

Mayer, in view of Bills, teaches the limitations of claim 1, as shown above. The combination of references fails to explicitly teach using quartz as the transparent target substrate. However, Williams teaches that quartz is transparent to laser light (column 8, lines 40-45). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize quartz as the target substrate. By doing so, one would have a reasonable expectation of success as Mayer and Bills both teach to use a transparent substrate and Williams teaches that quartz is transparent.

Claims 26-35 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 6,159,832) in view of Bills et al. (US 5,308,737), as applied to claim 1 above, and further in view of Baer et al. (US 6,495,195 B2).

Mayer, in view of Bills, teaches the limitations of claim 1, as shown above. The combination of references fails to explicitly teach depositing biomaterials. However, Baer teaches a process of laser transferring biomaterials by a process that uses a similar transparent substrate, radiation-absorbing layer, and composite layer, as taught by Bills (column 2, lines 25-54). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to deposit biomaterials by the process taught by Mayer, in view of Bills. By doing so, one would have a reasonable expectation of success as the process taught by Bills is

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independent of transfer material, due to the matrix material causing the transfer, and Baer teaches a similar process that transfers biomaterials.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 6,177,151 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present invention requires a matrix material and a transfer material, which reads on being a colloidal or particulate suspension.

Claims 1-39 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of copending Application No. 10/141,820. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present invention requires a matrix material and a

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transfer material, which reads on being a rheological fluid, as defined by applicant in claim 24 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-39 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/237,072. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present invention requires a matrix material and a transfer material, which reads on being a rheological fluid, as defined by applicant in claim 26 of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

With respect to the prior art rejections:

Applicant argues that Bills fails to teach a gap between the target substrate and the receiving substrate. Examiner agrees and has withdrawn the rejections based on Bills alone accordingly.

Applicant argues that the process resulting from the combination of Mayer and Bill would not be operable, as the transfer of discrete portions of metal would not result in electrical conductivity. This is not found persuasive. Joyce, Jr. et al. (US 5,383,559) is cited as showing

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that transferring discrete portions of metals retains the properties of the metal, including electrical conductivity (column 3, lines 1-39).

Applicant argues that biomaterials are claimed in claim 36, which is not taught by Mayer or Bills. This is not found persuasive. The claim is open to one or more materials including metal, which the references teach.

Applicant argues that there is no motivation to combine Mayer with Corbett. Examiner agrees and has withdrawn those rejections accordingly.

Applicant argues that the process of Mayer would destroy the biomaterials. This is not found persuasive, as the proposed combination is Mayer, in view of Bills. The transfer donor material of Bills would prevent the biomaterials from being destroyed.

All other arguments pertaining to prior art parallel those above and are not found persuasive for the reasons indicated above.

With respect to the double patenting rejections:

Applicant argues that US 6,177,151 fails to teach the transfer of a composite material. This is not found persuasive. The transfer material of the US Patent may be a composite.

With respect to SN 10/141,820 and 10/237,072, applicant has not argued the validity of these provisional rejections, thus it is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached at (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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